

# Mohammadamin Shafiei

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## EDUCATION

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### Master's Degree in Human-centered Artificial Intelligence

[University of Milan](#)

Milan, Italy  
Sep. 2023 - Present

- Enrolled in courses like Machine Learning, NLP, AI Ethics Law, Sociology of AI, Information retrieval, and Social Psychology for AI design.

### Bachelor's Degree in Computer Engineering

[Shahid Beheshti University](#)

Tehran, Iran  
Sep. 2018 - Feb. 2023

- Last two year's GPA: 18.3/20
- Bachelor Project Title: Link prediction and similarity measurement in dynamic graphs using Autoencoders

## PUBLICATIONS

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### Iranian Massive Multi-discipline Multimodal Understanding Benchmark

Mohammadamin Shafiei\*, Hamidreza Saffari\*, Donya Rooein, Francesco Pierrri, Debora Nozza

Under Preperation  
[ACL2025](#)

### Can I introduce my boyfriend to my grandmother? Evaluating LLMs on Iranian Culture

Hamidreza Saffari\*, Mohammadamin Shafiei\*, Donya Rooein\*, Francesco Pierrri, Debora Nozza

Submitted  
[NAACL2025](#)

### PsychoBERT: Fine-tuning Pre-trained SBERT Models for Psychological Similarity

Mohammad Atari, Aida Davani, Mohammadamin Shafiei\*, Hamidreza Saffari\*, Amirhessam Bolandi\*

Under Preperation  
[WR•AI•CogS•1](#)

### Software Defect Prediction Using Visualization Techniques and CNNs

Amirhessam Bolandi\*, Hamidreza Saffari\*, Mohammadamin Shafiei\*, Mojtaba Vahidi-Asl

Submitted  
[Expert Syst. Appl.](#)

## RESEARCH EXPERIENCES

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### NLP, Computational Social Science, and Iranian culture

Under the supervision of Dr. Francesco Pierrri and Dr. Debora Nozza

Mar. 2024 - Present  
[UBocconi](#) and [Polimi](#)

- Created a multimodal Farsi dataset with images and text, requiring both for each question. It includes culture-agnostic and Iranian-specific samples to evaluate model understanding of Iranian culture and language.
- The Persian Social Norms (ISN) dataset contains Iranian social norms with contexts and cultural labels. Generated with LLMs and refined by native speakers, it ensures quality and ethical standards.

### Psychology and NLP

Under the supervision of Dr. Mohammad Atari

Sep. 2023 - Present  
[UMass, Remote](#)

- Aimed at capturing psychological similarity between sentences. The work is a fine-tuned version of SBERT or Sentence BERT with capabilities to understand psychological similarities instead of linguistic similarities.

### Dignity, Honor, and Face norm generation and classification using LLMs

Under the supervision of Dr. Farhad Moghimifar and Dr. Gholamreza Haffari

Oct. 2023 - Feb. 2024  
[MonashU, Remote](#)

- Used LLMs in order to detect to which class of norms a specific norm belongs. It also allows us to find potential biases toward some cultures.

### Link prediction in dynamic graphs

Under the supervision of Dr. Sadegh Aliakbary

Sep. 2022 - Jan. 2023  
[SBU](#)

- Link prediction in dynamic graphs via Autoencoders and Siamese Networks.

### Software Defect Prediction Using Visualization Techniques and CNNs

Under the supervision of Dr. Mojtaba Vahidi-Asl

Sep. 2021 - Jun. 2022  
[SBU](#)

- Developed a Deep Learning method to determine whether a program is faulty or not using visualization and Deep Learning techniques.
- Achieved **92.9%** accuracy.

## WORK EXPERIENCE

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- Human-centered AI special tutor** Sep. 2024 – Present  
[University of Milan](#), Tutor team Milan, Italy
- Enhanced the communication between students and the program board regarding thesis projects, internships, and coursework concerns.
- AI Engineer** May. 2023 – Sep. 2023  
[Wallex](#), Data science Team Tehran, Iran
- Developed an intelligent assistant for WALLEX users, helping them efficiently accomplish their cryptocurrency-related goals.
  - Used ChatGPT in some parts of the assistant and engineered the prompts received by ChatGPT so that better results were achieved.
- Back-end Engineer** Feb. 2023 – Oct. 2023  
[Behsa](#), Data Engineering Team Tehran, Iran
- Developed a monitoring system that reports the overall and detailed health status of the system.
  - Implemented an API and a pipeline for data using Spring.
- AI intern** Jun. 2022 – Sep. 2022  
[IPM](#), Hardware team Tehran, Iran
- Improved the performance of transformers using middle-level programming languages.

## TEACHING EXPERIENCE

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- Teacher Assistant** [SBU](#), Tehran, Iran
- Embedded and Real time Systems | (*2X Head of the TAs*) Fall 2022, Spring 2023
  - Machine Learning Fall 2022
  - Fundamentals of Robotics | (*1X Head of the TAs*) Spring 2022
  - Microprocessors and Assembly Language | (*3X Head of the TAs*) Spring 2021, Fall 2022, Spring 2022
  - Computer Architecture | (*2X Head of the TAs*) Spring 2021, Spring 2022
  - Logic Circuits Fall 2021
  - Principles of Algorithms Fall 2020

## SKILLS

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**Languages:** Persian (native), English (fluent, TOEFL ibt overall score: 99)

**Programming Languages:** Python, Java, C/C++, Matlab, x86 and Arm Assembly, SystemVerilog, VHDL

**Frameworks/Libraries:** Keras, Tensorflow, PyTorch, Pandas, NumPy, Scikit-Learn

## SELECTED PROJECTS

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- Fake New Detection and Generation** | *Python, Keras, PyTorch, LLMs* 2024
- explored how AI can be utilized for both detecting fake news and generating it.
  - Employed BERT and LSTM for detection and ChatGPT and Claude for generation.
- Audio Classification** | *Python, Keras, librosa, sklearn* 2023
- Trained a Neural Network model on MFCC features of audio files to detect the word that they contain.
  - Employed audion augmentation techniques, like time shifting since the dataset was too small.
- Next Frame Prediction** | *Python, PyTorch, Pandas* 2022
- Developed a model to predict the next frame of a series of GIFs using CNNs and LSTMs.
  - Improved the overall loss compared to previous works.
- Online shop Comments Classification** | *Python, Keras, Scikit-Learn, Pandas, Hazm* 2022
- Implemented a model to classify comments on products of an online shop into recommended or not recommended classes.
  - Used a LSTM network, SGD classifier, and ensemble learning.
- A Food Ordering and Delivery Website Back-End** | *Golang, MongoDB* 2021
- Implemented features like ordering food, crating a restaurant, searching for specific foods, creating food categories and so on.

# SELECTED UNIVERSITY COURSES

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## Graduate Courses

- Principles of Social Psychology for AI Design | 4/4 Spring 2024
- Logic for AI | 4/4 Spring 2024
- Math for AI | 4/4 Spring 2024
- NLP | 4/4 Fall 2023
- Machine Learning | 4/4 Fall 2023
- AI, Ethics, and Law | 4/4 Fall 2023
- Deep Learning (During B.Sc.) | 4/4 Spring 2022

## Undergraduate Courses

- Fundamentals of Computer Vision | 4/4 Fall 2022
- Fundamentals of Robotics | 4/4 Fall 2021
- Internet Engineering | 4/4 Spring 2021
- Artificial Intelligence and Expert Systems | 4/4 Fall 2020
- Signals and Systems | 4/4 Spring 2020
- Principles of Algorithms | 4/4 Spring 2020
- Computer Architecture | 4/4 Spring 2020

# ONLINE COURSES

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- Natural Language Processing with Classification and Vector Spaces | [Coursera](#) Sep. 2021
- How to Win a Data Science Competition: Learn from Top Kagglers | [Coursera](#) Jul. 2021
- Introduction to Deep Learning | [Coursera](#) Feb. 2021
- Introduction to Data Science in Python | [Coursera](#) Feb. 2021
- Neural Networks and Deep Learning | [Coursera](#) Oct. 2021
- Supervised Machine Learning: Regression and Classification | [Coursera](#) Sep. 2020
- Advanced Python Programming | [Quera](#) Sep. 2020